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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/524,859

02/18/2005

Isao Karasawa

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EXAMINER

THROWER, LARRY W

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

06/23/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/524,859	Applicant(s) KARASAWA ET AL.	
	Examiner LARRY THROWER	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 5-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 February 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 27, 2009 has been entered.
2. Claim 1 is amended; claims 5-10 are withdrawn; claims 1-4 are under examination.

Drawings

3. Figure 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4. Claim 2 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 1-4** are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (APA; paragraph references to US 2005/0263207) in view of Saitoh (US 6,228,153).

- Regarding **claim 1**, the APA discloses a method of introducing a plastic raw material liquid (¶5). The method includes positioning a liquid delivery unit which is actuatable by a single drive shaft for drawing in and discharging fluid by pressing a resilient tube with presser rollers (¶5; fig. 5), discharging flow of the plastic raw material liquid from the liquid delivery unit and introducing the combined plastic raw material liquid into a casting polymerization mold (¶5; fig. 5).
- The APA fails to disclose positioning a plurality of delivery units parallel to each other, discharging flows of the liquid at different times from each other from the units,

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and combining the flows of the liquid discharged from the units with each other.

However, Saitoh discloses a method of introducing a liquid (abstract) which includes positioning a plurality of delivery units, which are actuatable by a single drive shaft (abstract), each for intermittently drawing in and discharging a fluid at a constant rate (figs. 4a, 4c, 9a; col. 5, lines 6-20; col. 10, lines 20-53) parallel to each other (figs. 4a, 4c, 9a; col. 5, lines 6-20), discharging flows of the liquid at different times from each other from the liquid delivery units (col. 5, lines 17-20; col. 10, lines 20-53), and combining the flows of the liquid discharged from the liquid delivery units (figs. 4a, 4c, 9a; col. 5, lines 6-20). As taught by Saitoh, this configuration effectively removes air bubbles and stabilizes the liquid (fig. 4c'; col. 10, lines 21-53). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of introducing a plastic raw material liquid of the APA with the delivery unit configuration of Saitoh in order to stabilize and remove air bubbles from the liquid, as taught by Saitoh (col. 10, lines 20-53).

- Regarding **claim 2**, Saitoh discloses the liquid delivery units drawing in and discharging the plastic raw material liquid by moving a plunger back and forth in a cylinder to change the volume of the cylinder (col. 5, lines 15-20).
- Regarding **claim 3**, Saitoh discloses an accumulator for changing the volume of a fluid depending on the pressure of the fluid disposed in a flow passage for the combined plastic raw material liquid (col. 10, lines 40-45; fig. 4c').
- Regarding **claim 4**, the APA discloses a filter (53) being disposed in a flow passage for the combined plastic raw material liquid (fig. 5; ¶5).

Response to Arguments

7. Applicant's arguments filed May 27, 2009 have been fully considered but they are not persuasive.

- Applicant argues that the APA and Saitoh do not teach or suggest positioning a plurality of liquid delivery units, which are actuatable by a single drive shaft. Specifically, Applicant argues that although Saitoh discloses a plurality of delivery units each for intermittently drawing in and discharging fluid at a constant rate, "no portion of Saitoh discloses that these delivery units are actuatable by a single drive shaft" (emphasis in Applicant's response). This argument has been considered but is not persuasive. As disclosed in the abstract of Saitoh, "[t]he apparatus comprises two pump units, each with two plungers of different diameters on a single shaft." Thus, directly contrary to Applicant's assertion, Saitoh discloses the limitation as claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LARRY THROWER whose telephone number is 571-270-5517. The examiner can normally be reached on Monday through Friday from 9:30AM-6PM est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina A. Johnson can be reached on 571-272-1176. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Larry Thrower/
Examiner, Art Unit 1791

/Christina Johnson/
Supervisory Patent Examiner, Art Unit 1791